disease involving neuronal degeneration, comprising administering to the individual having such an injury or disease at least one active ingredient selected from the group consisting of

(a) nervous system (NS)-specific activated T cells;

(b) a NS-specific antigen;

(c) a peptide derived from a NS-specific antigen;

(d) a nucleotide sequence encoding a NS-specific antigen; and

(e) a nucleotide sequence encoding a peptide derived from a NS-specific antigen,

B1 thereby causing NS-specific activated T cells to accumulate at the site of injury or disease and to reduce neuronal degeneration at that site

wherein, when said active ingredient is NS-specific T cells, said administration is intraperitoneal,

with the proviso that when the disease being ameliorated is an autoimmune disease, the NS-specific antigen is not an autoimmune antigen involved in that disease and said T cells are not activated against an autoimmune antigen involved in that disease.

Insert new claim 41 as follows:

B2 41 (New). A method in accordance with claim 1, wherein said injury or disease is an injury.

Rewrite claim 2 in amended form as follows:

B3 2 (Amended). The method according to claim 41, wherein the injury is selected from the group consisting of spinal cord injury, blunt trauma, penetrating trauma, hemorrhaging stroke, and ischemic stroke.

Insert new claim 42 as follows:

B4 42 (New). A method in accordance with claim 1, werein said injury or disease is a disease.

Rewrite claim 3 in amended form as follows:

B5 3 (Amended). The method according to claim 42, wherein the disease is selected from the group consisting of diabetic neuropathy, senile dementia, Alzheimer's disease, Parkinson's disease, facial nerve palsy, glaucoma, Huntington's chorea, amyotrophic lateral sclerosis, non-arteritic optic neuropathy, and vitamin deficiency.

Insert new claim 43 as follows:

B6 43 (New). A method in accordance with claim 1, wherein said active ingredient is NS-specific activated T cells.

Rewrite claims 4 in amended form as follows:

B7 4 (Twice-amended). The method according to claim 43, wherein said NS-specific activated T cells are selected from the group consisting of autologous T cells, allogeneic T cells from related donors, and human lymphocyte antigen (HLA)-matched

B7 or partially matched semi-allogeneic or fully allogeneic donors.

Rewrite claim 7 in amended form as follows:

B8 7 (Amended). The method according to claim 4, wherein said NS-specific activated T cells are autologous T cells.

Rewrite claims 5, 6 and 8 in amended form as follows:

5 (Amended). The method according to claim 7, wherein said autologous T cells have been sensitized to human NS antigen.

B9 6 (Amended). The method according to claim 5, wherein said T cells have previously been taken from an individual, have been sensitized to human NS antigen, and then have been stored for future use.

8 (Amended). The method according to claim 4,

B10 wherein said T cells are semi-allogeneic T cells.

Insert new claim 44 as follows:

44 (New). A method in accordance with claim 1,

B11 wherein said active ingredient is a NS-specific antigen, a peptide derived from a NS-specific antigen, a nucleotide sequence encoding a NS-specific antigen, or a nucleotide sequence encoding a peptide derived from a NS-specific antigen.

Rewrite claim 9 in amended form as follows:

9 (Amended). The method according to claim 44 wherein said NS-specific antigen is selected from the group consisting of myelin basic protein, myelin oligodendrocyte glycoprotein, proteolipid protein, myelin-associated glycoprotein, S-100, β-amyloid, Thy-1, P0, P2, and neurotransmitter receptors.

B12

Insert new claim 45 as follows:

45 (New). A method in accordance with claim 44, wherein said active ingredient is a NS-specific antigen or a peptide derived from a NS-specific antigen.

B13

Rewrite claims 10-15 in amended form as follows:

10 (Amended). The method according to claim 45 wherein said active ingredient is a peptide derived from a NS-specific antigen selected from the group consisting of immunogenic epitopes of said antigen and cryptic epitopes of said antigen.

B14

11 (Amended). The method according to claim 10, wherein said peptide is an immunogenic epitope or a cryptic epitope derived from myelin basic protein.

12 (Amended). The method according to claim 10, wherein said peptide corresponds to at least one of the sequences selected from the group consisting of p11-30, p51-70, p91-110, p131-150, and p151-170 of myelin basic protein.

13 (Amended). The method according to claim 45, wherein the NS-specific antigen or peptide derived therefrom is administered intravenously, intraperitoneally, orally, intranasally, intrathecally, intradermally, topically, or bucally.

14 (Amended). The method according to claim 13, wherein said mucosal administration is selected from the group consisting of oral, intranasal, buccal, vaginal, and rectal administration.

B14 Cont

15 (Amended). The method according to claim 45, wherein said active ingredient is myelin basic protein and is administered orally.

Insert new claim 46 as follows:

46. A method in accordance with claim 1, further including administering to said individual an effective amount of a composition for up-regulating B7.2 costimulatory molecule or genetically manipulating B7.2 costimulatory molecule in said individual.

B15

Rewrite claims 19 and 38 in amended form as follows:

19 (Twice-amended). A method for providing T cells for future use, comprising:

B16

obtaining T cells from a human individual who is not suffering from an injury or disease involving neuronal degeneration;

activating said T cells against at least one nervous system antigen; and

storing said activated T cells in a cell bank of T cells that have been activated against a nervous system antigen, for future use in the case that the individual from whom the T cells were originally obtained sustains an injury or contracts a disease of the nervous system involving neuronal degeneration.

B16 Cont

38 (Amended). A method for reducing neuronal degeneration in the central nervous system or peripheral nervous system of an individual suffering from neuronal degeneration, comprising causing NS-specific activated T cells to accumulate at the site of neuronal degeneration in the individual, thereby reducing neuronal degeneration at that site, with the proviso that when the individual has an autoimmune disease, said T cells are not activated against an autoimmune antigen involved in that disease.

B17

REMARKS

Claims 1-16, 19 and 38-46 are presently pending in the present application. No claims have been allowed. The official action of July 30, 2002, has now been carefully studied. Reconsideration and allowance are hereby respectfully urged.